

CONVERSION FACTORS

meters (m)

0.3937

0.6214

To obtain

inches (in)

feet (ft)

GEOLOGIC QUADRANGLE MAP DEADMAN SPRING SE QUADRANGLE, NEVADA

Older lacustrine beach deposits (late Pleistocene)-Grayish-orange to paleyellowish-orange pebbly sand; unconsolidated to weakly consolidated, calcareous. Sand is chiefly fine to medium, moderately well sorted; pebbles consist of limestone, dolomite, ash-flow tuff, and lava clasts mostly less than 3 cm across that comprise about 10 percent of the deposit. Unit forms two low discontinuous ridges that mark former shorelines of a late Pleistocene pluvial lake called Lake Bristol by Mifflin and Wheat (1979). Deposits are poorly exposed and ridges have been dissected to form a line of low elongate mounds about 1 m high that are covered with a sparse pebble lag. The higher of the two ridges stands at an elevation of approximately 1,410 m about 1.7 km southwest of Bristol Reservoir No. 2 and approximately 1,407 m at the northernmost exposure in the quadrangle (SE1/4 sec. 16, T. 7 N., R. 64 E.). This 3 m difference in elevation is probably due to post-lake faulting. These beach deposits probably mark the highest sustained level of the lake and indicate a water depth of about 14 m. Unit Obo correlates with unit Oib of the quadrangle adjacent to the south (Swadley and Simonds, 1994). The beach deposits commonly overlie unit Qae, but locally the unit underlying the beach deposits is concealed by a thin deposit of younger alluvium (Qal) and is unidentified. The only soil development observed consists of a 3- to 4-cm-thick sandy vesicular A horizon. Maximum exposed thickness 1 m, total thickness probably 2 m or less

Alluvium of Willow Spring (middle Pleistocene)—Unit named for deposits near Willow Spring in the Delamar 3 SE quadrangle (Swadley and others, 1994), about 70 km to the south. Grayish-orange to light-yellowish-brown gravelly sand and gravel; weakly to moderately consolidated, poorly to moderately well sorted, poorly bedded. Clasts in gravelly sand and gravel consist of angular to subrounded limestone, dolomite, ash-flow tuff, and lava pebbles, cobbles, and boulders commonly less than 1 m across. Sand component of gravelly sand and sand matrix of gravel are chiefly medium to very coarse. Unit forms poorly exposed fan remnants of interbedded gravelly sand and sandy gravel on the middle and upper parts of the fan apron chiefly near the west border of the quadrangle. Some of the fan remnants are veneered by thin, discontinuous deposits of unit Que. Depositional surface of unit is mostly intact but is moderately dissected by V-shaped washes and is locally stripped to the upper part of the soil carbonate horizon; surface typically stands 2-5 m above active washes. A moderately packed stone pavement is developed sparsely; some surface clasts have a thin, uneven coating of rock varnish. The surface layer typically contains sparse to common chips of pedogenic carbonate. Soil developed on unit includes a 4- to 6-cm-thick vesicular A horizon, a darkvellowish-orange cambic B horizon that is only very locally preserved, and a 1-m-thick K horizon that commonly has stage III carbonate development in the upper part of the horizon. At most exposures the original A and B horizons have been eroded; a younger A horizon has developed that includes carbonate chips from the partly eroded K horizon. Unit thickness ranges to more than 8 m Pahranagat Formation (Miocene)-Light-brown to moderate-orange-pink, non-

welded to moderately welded rhyolitic ash-flow tuff. Only the lowermost part of the unit is exposed and caps a small mesa on the west edge of the map area. The tuff is moderately to poorly welded and contains abundant flattened white pumice fragments as much as 10 cm long. The tuff contains about 20 percent phenocrysts (30-40 percent sanidine, 20-40 percent quartz, 20-40 percent plagioclase, 5-10 percent biotite, and trace amounts of homblende and Fe-Ti oxides). Formation is partially equivalent to the Pahranagat Lakes tuff of Williams (1967) which was named for exposures west of Pahranagat Lakes, about 55 km southwest of the map area. The formation is partially equivalent to the upper cooling unit of the tuff of White Blotch Spring of Ekren and others (1971) and the granite-weathering tuff of Quinlivan and Rogers (1974). These units are more extensive to the west of the map area (Deino and Best, 1988). Best and others (1989) suggested that the source caldera is located about 135 km west-northwest of the map area. An 40 Ar/39 Ar age of 22.65 Ma was determined by Deino and Best (1988). The tuff is about 5 m thick in the map area; the upper part may have been partially removed by erosion Condor Canyon Formation (Miocene) - Only the Bauers Tuff Member is present in

Bauers Tuff Member—Resistant, pale-reddish-brown to pale-reddish-purple, crystal-poor, densely welded rhyolitic ash-flow tuff. Only the uppermost part of the unit is exposed along the base of a small mesa near the western edge of the map area. The tuff is characterized by abundant light- to dark-gray lenticules as much as 2 m in length; a basal vitrophyre exposed in the quadrangle adjacent to the south (Swadley and Simonds, 1994) was not observed. Contains about 20 percent phenocrysts (60 percent plagioclase, 30 percent sanidine, 10 percent biotite (commonly bronze colored), and trace amounts of pyroxene and Fe-Ti oxides) and generally a few percent lithic fragments. The source of the Bauers Tuff Member was predicted on the basis of isopach data to be in the Caliente caldera complex (Williams, 1967). This hypothesis was confirmed and the source caldera named the Clover Creek caldera for exposures north of the town of Caliente, which is about 30 km east of the map area (Rowley and Siders, 1988; Rowley and Shroba, 1991; Rowley and others, 1989). Two K-Ar ages on

the Bauers Tuff Member is exposed in the map area

Guilmette Formation (Devonian)—Only a small part of the Guilmette Formation is exposed near the northwestern edge of the map area. Correlated with the upper part of the entire formation, the Guilmette of the map area consists of 1- to 2-m-thick beds of light-gray, calcareous sandstone and sandy limestone, gray to grayish-brown limestone having silty horizontal laminations and thin calcite stringers, and 1- to 2-m-thick beds of light-brown quartzite containing horizontal bedding. Some gray limestone beds are separated by thin planer beds of calcareous sandstone and horizontally laminated limestone. The lowermost exposed beds consist of light-gray limestone interbedded with 1- to 2-m-thick beds of calcareous sandstone containing planer and trough crossbeds. The base

biotite and sanidine (Armstrong, 1970) and one age on plagioclase (Fleck and

others, 1975) yield an average age of 22.3 Ma. More precise 40 Ar/ 39 Ar ages yield an average of 22.78 Ma (Best and others, 1989, table B3). About 10 m of

Contact

Fault—Dotted where concealed; bar and ball on downthrown side. Direction and amount of dip of fault plane shown by arrow. Hachures indicate postfault deposit along base of fault scarp in surficial deposits. Triangle and number indicate height of fault scarp in meters

of the formation is not exposed; exposed thickness is at least 50 m

Fissure—Partly filled; apparent offset perpendicular to fissure walls

Erosional scarp—Cut by wave action along shoreline of pluvial lake

21 Strike and dip of beds

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